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ABSTRACT

This study explored the age variable within the framework of Stephen Krashen's (1973, 1977, 1978, 1981, 1982) monitor hypothesis. The experiment conducted two types of English language lessons based on antithetical pedagogical strategies. The first aimed at the activation of monitor use, constructed around formal learning tasks and the second aimed at the avoidance of monitor activation, constructed around formal label tasks labeled, for the purposes of this experiment, "with monitor" and "without monitor." The lessons were taught to two classes of each of the following age levels: 8-9 years (3rd grade), 11-12 years (7th grade), and 18-19 years (last year of high school). To one class of each age level, the target structure was presented using the strategies of the without monitor lesson. The same structure was presented to the other class using the with monitor lesson. After two days, the same test was administered to both groups. Results indicated that the older students were superior in level of foreign language attainment. It is suggested that the older students fare better when taught with strategies that exploit the activation of monitor use. The type of teaching strategy does not seem to influence language attainment in younger students. (JL)

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Age and efficacy of monitor use in an EFL classroom setting

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Introduction

The work of Stephen Krashen, the well-known scholar of problems concerning second language acquisition, has had a notable influence on the research tendencies in applied linguistics and on consequent classroom practice. Krashen has formulated a number of hypotheses on the nature of second language acquisition, uniting them for the sake of argumentation in what has been called the "monitor model" (Krashen 1977a, 1977b, 1978, 1981, 1982). In the wake of the affirmation of post- Chomskyan positions on the nature of language development, based, first of all, on the rejection of the behaviourist explanations of language learning (S-R theory), and, secondly, on the assumption of the role of somewhat innate mechanisms in this process, Krashen seeks to analyze the data available in several linguistic-related disciplines in order to provide a systematic framework for the description of the modalities of second language development.

Central to his theorization is the conviction that there exist two different modalities for language development, a some what 'subconscious' modality, termed "acquisition" and a more formalized, or 'conscious' modality, termed "learning". (Krashen, 1981). "Acquisition" would be the way most children acquire their first language, and probably second or more languages, which they are exposed to in host environments. "Learning" is the result of conscious attention on the part of the subject, arising from a formalized situation such as the classroom or a study program. Acquisition environments are natural environments permitting verbal interaction with native speakers in real world settings, where emphasis is on meaning rather than form, on communication rather than correctness, on interaction rather than grammar. "Learning' occurs in the opposite type of environment (classrooms and study rooms), where emphasis is on correctness and knowledge of the L2 as a formal system, and where language development is achieved through formal language learning tasks: grammar exercises, translations, rule explanation, error correction, etc. Acquisition strategies have always been associated with children. Formal learning strategies seem on the other hand to be the way adults approach foreign and second languages. However, one of Krashen's contributions to our understanding of this process is his suggestion that, although children normally "acquire" and

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adults "learn' given certain conditions, adults can also "acquire".

The monitor model for adult second language acquisition hypothesizes precisely this: that adults can also acquire but tend to guide the acquisiton process by means of the use of a monitor-like mental structure whose degree of activation will depend on a series of biological and affective factors. Some of these factors are natural to the development of the human subject, and therefore common to all acquirers, and some are of a strictly personal nature, relative to the personality profile of the individual.

Therefore, one of the principle biological variables to be understood, before proceeding to the more complex sociopsychological ones is that of age. To what extent does age make a difference in the quality and quantity of second language development? Despite years of theorization and experimental study on this point, the profession has not yet come up with a satisfactory answer. It is a common belief that children are better L2 performers than adults. This conviction has not been verified however in the experimental literature, and is sustained mainly by suggestions on the part of neurolinguists concerning the role of age in determining accents in second language learners. These observations have given rise to what has been labelled the" critical period hypothesis in SLA ",stating that there exists a turning point for the acquisiton of native or near native second language acquisiton. This turning point would be a biological one, determined by the age of the subject. Moreover, due to the hypothesis deriving from the initial studies of Lenneberg(1967) that the period of puberty is characterized by a termination of the process of cerebral lateralization and, therefore loss of neurological brain plasticity, the conviction remains that languages are learnt well before but with great difficulty after the puberty threshold. Although Krashen rejects the attribution of adult-child differences to the event of cerebral lateralization, (Krashen, 1973), he accepts the existence of the so-called LAD (language acquisition device) in Chomskyan psycholinguistics. Moreover, contrary to the position which sees the LAD ending at puberty, Krashen advances the possibility of its existence even in adults. " In hypothesizing that adults acquire," he notes "I am hypothesizing that the language acquisition device does not disappear at puberty. Adults still have access to the LAD, even though many adults "fossilize"or cease to make progress before they reach native-like levels of proficiency in the second language." (Krashen, 1981:99).

If no substantial changes occur in the LAD at puberty, how can we explain the observed differences betwen adults and children in second language acquisition? At this point Krashen suggests that these differences are related to the personality changes which characterize the puberty threshold. Krashen hypothesizes that affective factors can "act to block the input from the LAD" (Krashen, 1981, p.101) and that " this affective filter is strengthened at puberty," (Krashen, 1982, p.216) This would then explain the differences between children and adults in second language attainment. Even within the monitor model framework, then, although mainly for affective, rather than for strictly neurological reasons, we find a distinction based on

the variable age. After puberty, because of the interference of affective variables, acquisition may be inhibited. The subject then more readily activates the monitor, thereby using conscious learning as a supplement to acquisition.

The Monitor hypothesis holds however that it is " acquisition" and not "learning" which is central, and that the fundamental goal of pedagogy should be to encourage "acquisition". Since "language acquisition occurs when we are not focused on language" (Krashen, 1981, p.108), the logical pedagogical consequence would be the avoidance of monitor activation in the classroom. If informal environments are preferable to formal ones, the more the classroom simulates the natural language environment, the more likely will acquisition take place. Therefore classroom strategy should be constructed around acquisition-like tasks rather than formal learning tasks.

The experiment which is reported here was constructed within this framework. It is the first of a series of studies on the relationship between age and the efficacy of monitor avoidance/activation in the study of English in a classroom setting in Italy. The aim of the experiment was twofold: on the one hand, to compare the efficacy of the two strategies(activation vs avoidance of monitor use) in the Italian scholastic setting, and on the other hand, to understand to what extent type of strategy interacts with age of the subjects, which would then provide further evidence for age-related hypotheses on the modalities of language development. In other words, if the results of the experiment found significant differences in attainment with the monitor avoidance strategy, the claim for the necessity to implement acquisiton-like strategies by use of exclusively communicative rather than formal learning tasks would be supported. Moreover if the success of one strategy over the other resulted to be significantly correlated to age group, some further evidence for the role of age in the determination of success in second language proficiency could be advanced.

METHOD

The study explored the variable age within the framework of Krashen's monitor hypothesis. The experiment constructed two types of English language lesson based on antithetical pedagogical strategies: the first aiming at the activation of monitor use, constructed around formal learning tasks, and the second aimed at the avoidance of monitor activation, constructed around formal learning tasks labeled for the purposes of this experiment with monitor and without monitor respectively.

The lessons were taught to two classes of each of the following age levels: 8-9 yrs old (3rd grade), 11-12 years old (7th grade) and 18-19 yrs old (last year of high school). The levels were labeled children, pre-adolescents, and late

adolescents.

To one class of each age level, the target structure was presented using the strategies of the without monitor lesson; to the other class the same target structure was presented using the strategies of the with monitor lesson. After two days, the same test was administered to both groups. Data were described in terms of percentages of correct answers and submitted to Student t statistical analysis.

Subjects

A total of 90 subjects participated in the experiment which was conducted in the state schools of the city of L'Aquila, capital of the Abruzzi, a region of central Italy. Two classes of 3rd graders (children), two classes of 7th graders (pre-adolescents) and two classes of senior high school students (late adolescents) were chosen. Both classes of each age level had had the same teacher, curricula, and FL learning history. From each class, 15 students were randomly chosen. The subjects were distributed as follows:

age level	without monitor	with monitor
children	15ss(M=9;F=6)	15ss(M=6;F=9)
pre-adolescents	15ss(M=7;F=8)	15ss(M=7;F=8)
late adolescents	15ss(M=8;F=7)	15ss(M=7;F=8)

Procedure

A target language structure to which the students had not been yet exposed was chosen for each age level. The target language content was the same for both strategies: with and without monitor.

For the children level, the target structure chosen for the experiment was the present progressive tense ; for the preadolescent level, the target structure was the English prepositions; and for the late adolescen the English conjunctions were used.

For each target structure in the preadolescent and late adolescent levels, 20 items were taught; due to the limited attention span of children, however, only ten items were taught in the lessons of the children level.

Each level was comprised of two groups. To one group the target items were taught using the with monitor tasks and to the second group the target items were taught using the without monitor tasks.

The lessons

Each lesson was a 50 minute contact period.

The teaching strategies were constructed in the following way:

The with monitor lesson placed attention on the formal aspects of the target structure; students were made aware of the aims of the lessons; learning tasks included rule explanations, translation, contrastive analysis, and explicit repitition of target items.

The without monitor lesson substituted these formal learning tasks with communicative tasks like interviews, role-playing activities, games, mime etc., with indirect repetition of target items directing students' attention to communication goals and meaning rather than form.

Both lessons included an oral phase and a reading phase. The exposure frequency for each item was three stimuli in the oral phase and two stimuli in the reading phase. Even in the reading phase, of course, monitor use was avoided in the without monitor lesson and activated in the with monitor lesson.

In order to give an idea of how the lessons were conducted, we can take the example of the English prepositions. For the without monitor lesson, in the oral phase , we talked about pictures and mimed situations, making sure that each of the prepositions was heard three times by the subjects. No attention was drawn to the target item. It was in a way "thrown in" to a conversation or dramatization. The subjects were not aware that they were being exposed to the prepositions. In other words the lessons simulated spontaneous input but the experimenters were careful to control quality and quantity of the input. In the

reading phase, a story containing the same prepositions was read, assuring that each preposition appeared twice. A reading phase was used because the testing was to adopt written protocols. Again however there was no attention drawn to the target item. The subjects simply read a story unaware that it encoded the target prespositions.

For the with monitor lesson the opposite strategy was used. -The subjects were made aware of the target items: what they were, how they awere used, what they meant, using explanation and translation. This meant that for example that the expewrimenters announced to the subjects that the objective of the lesson was to learn the prepositions. Each preposition was translated and illustrated in a sentence, drawing the students attention to form and use. In the reading phase the subjects read sentences including the preposition which was underlined. The strategy therefore in the with monitor lesson was metalinguistic. It aimed at making the subjects conscious at each step of what they were doing, by solliciting their metalinguistic ability or using Krashen's terminology, by "activating the monitor". The experimenters were careful however for the sake of experimental symmetry to assure that the exposure frequency for each item was the same for both strategies.

The test

The test was a fill-in-the-slot exercise which elicited in context the items which had been the targets of the lessons. The exercise was composed of twenty sentences for the pre-adolescent and late adolescent groups and ten items for the children group, with target item missing. (Totals swere transformed into percentages for data analysis). The subjects were told to fill in the appropriate item in each sentence. An example of the exercise for each of the levels is given below:

"John is _____rope." (children level: present progressive tense)

"The cat is climbing _____the tree." (pre-adolescent level: prepositions)

"I shall not go _____you come with me." (late adolescent level: conjuntions).

In other words, again for the sake of experimental symmetry, the same test had to be given to both groups in each age level. The test was therefore constructed so as to include characteristics of both strategies,---- of the the without monitor lesson, in that the items were presented in context, and of the with monitor lesson ,in that the items were elicited in written discrete-point form. The rationale behind our method of testing, however, is that once language, following Krashen, has been acquired", or, following Chomsky, "internalized", it should appear in performance no matter what type of elicitation is adopted.

Data analysis

Correct answers were totaled, transformed into relative values and submitted to Student t analysis.

Results

Comparison with monitor and without monitor for the overall group

There was no significant difference in the overall comparison between with monitor and without monitor strategies.

Comparison of with monitor and without monitor strategies for each group

For both the children and the preadolescent groups, a non-significant difference resulted.

For the late adolescent group, a significant difference resulted ($t=3.90$; $p < .001$), to the advantage of the with monitor strategy.

Comparison of groups for the without monitor strategy

The Student t analysis between coupled groups revealed a significant difference only for the preadolescent vs late adolescent groups ($t=3.01$; $p < .001$), to the advantage of the late adolescent group.

Comparison of groups for the with monitor strategy

A significant difference resulted both for the comparison children vs. late adolescent ($t=7.5$; $p < .001$), to the advantage of the late adolescents, and for the comparison preadolescent vs late adolescents ($t=5.91$; $p < .001$), to the advantage again of the late adolescents.

Conclusion

The graph in Figure 1 clearly indicates the superiority of the late adolescents in foreign language attainment.
Late adolescents seem to be better acquirers/learners of English as a foreign language than children and pre-adolescents, at least in this non-host Italian scholastic setting.

Moreover the type of teaching strategy definitely seems to influence attainment in these older learners.

When taught with the without monitor strategy, the superiority of the late adolescent group was significantly greater when compared to the pre-adolescent group

When taught with the with monitor strategy, this superiority proved to be significantly greater when compared to the attainment of both the children and the pre-adolescent groups.

Late adolescents therefore definitely seem to fare

better with teaching strategies which exploit the activation of monitor use.

Within a "monitor model" framework this result points to the possibility that the advantage of the older learners could be due to the active role of the so-called monitor in the intake of L2 data.

On the other hand, the graph reveals the similarity in attainment between the two strategies with monitor and without monitor in both the children and the pre-adolescent groups. The type of teaching strategy does not seem to signficantly influence attainment in younger learners.

Discussion

Obviously these results cannot be considered as conclusive. There is an inherent weakness in most of the research in this area restricted to one type of task and usually cross-sectional rather than longitudinal, as noted in Andersen, 1987. The author is presently working on a long term project which utilizes a battery of tests , more control variables and includes longitudinal as well as cross-sectional investigation.

There are however a few points worth noting on the basis of this experiment and those made by other researchers.

The fact that the late adolescent demonstrated better attainment when taught with both strategies (with andwithout monitor) provides a fruitful contribution to the opinion held by Snow and Hoefnagel-Hohle (1978a) that "older is better" as far as second language learning is concerned. In fact their experiments demonstrate that older learners outperform younger learners in all tests of language ability, a factor which has lead them to question the critical period hypothesis in second language learning(1978b). If older learners perform as well as(or even better than) children, there is therefore no evidence of a direct relationship between language ability and neurological changes (cerebral lateralization, loss of brain plasticity etc), which supposedly occur around the age of puberty.

The second point to be made is that, surprisingly, this experiment did not confirm the expected advantage of the without monitor strategy in younger learners, whose values were only slightly higher than those of the with monitor strategy and non-significant. Neither were they significant in the pre=adolescent group. Our results suggest that younger learners do not seem to fare better with acquisition-like strategies as implemented in our without monitor lesson. This could lead us to question the association of "acquisition" with children and " learning" with adults. Moreover, where is the empirical evidence for the hypothesis of a dual modality (acquisition and learning) in L2 development, which can account for the widely observed (but never satisfactorily explained) child-adult differences in L2?

Although Krashen has hypothesized an acquisition/learning dichotomy, he has also argued that the language learning device (LAD) could be simply fossilized in adults. If the LAD still

exists in adults, then adults can acquire as well as learn.

Could we reverse this position? Could we suggest in the wake of Snow's " older is better" position and on the basis of this experiment that children, also, learn as well as acquire? Can we suggest that this dual modality is present in both children and adults alike, and that perhaps a monitor-like mental structure for the purpose of language processing is active even in children?

Research in psycholinguistics has explored the question of the formation of formal categories in first language acquistion. Maratsos has called attention to the evidence in psycholinguistic research that "children have considerable skill in making fine-grained grammatical analyses and often appear to be learning individual word-to-operation links."(1982:265)

Moreover, the role of explicit knowledge in second language development has also been explored by some researchers.(cf. Bialystok, 1979; Gass, 1983; Tarone, 1982; Schachter et al.1976). Gass in particular notes that explicit grammar knowledge is central to metalinguistic awareness which she claims has been found to be a "facilitator of acquisition." (1983, p.277).

Perhaps the clearest answer to this question comes from the direction taken by Titone(1985) who defines metalinguistic ability from a developmental viewpoint. Titone distinguishes between metalingusitic awareness and metalingusitic consciousness, and describes how the metalinguistic awareness of the younger learner develops into consciousness, due to the cognitive growth of the individual and the influence of formal education.

Sorace (1982) also offers a cognitive explanation in the following sense. We know from the studies of Atkinson and Shriffin (1971) that, if the input does not enter the short term memory (STM), reiteration and passage into the long term memory (LTM) is obstructed. Transferral into the LTM is possible only if the network of knowledge relations in the L2 system is sufficiently organized and structured in order to insert the new information. Obviously, the richer the epistemic database of the subject, the faster and richer the L2 intake; and obviously, older learners are more cognitively equipped than younger learners in this sense.

Sorace (1982) also notes that students in the early stages of L2 development may not have a sufficiently elaborated L2 system for the interpretation of L2 data. Therefore length of exposure also seems to be a crucial factor. In our experiment, for example, although the target structures were chosen according to curriculum development, (being more complex for the late adolescents), the very fact that these older learners had been exposed to the L2 for several years may have determined faster reception of new data.

One could argue however that within a developmental framework, we should have expected a more linear slope in our graph. Instead, the percentages of the preadolescent group were only slightly higher than the values of the children group for the with monitor strategy . Here perhaps we should consider the

role of affective factors in Krashen's theorization (cf. also Brown, 1981; Schumann, 1977; Dulay and Burt and Krashen, 1982). If we accept the possibility of an affective filter which according to Krashen can "block input from the LAD," and if we recall that the literature in psychological research agrees on the critical nature of identity formation in the puberty threshold, we could hypothesize that L2 development may undergo regression or, at any rate, a moment of stasis in preadolescents due to the intervention of affective variables which somehow interfere with L2 processing .

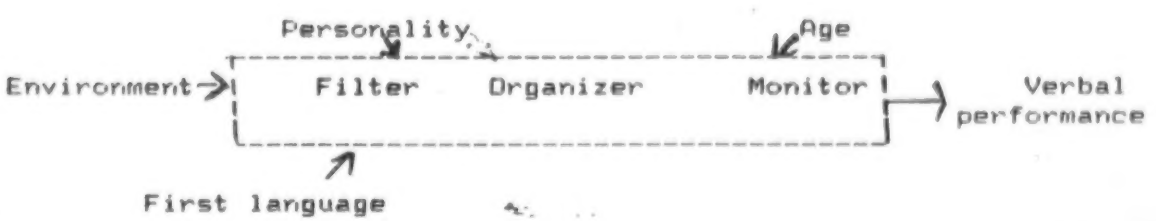
Many scholars have warned the profession against facile explanations of such a complex process as is language learning and offer more holistic, interactive accounts of the process, taking into consideration all variables (biological, psychological, social and more specifically situational and scholastic) which concur in the formation and development of language competence.

D. Wilkins (1982) has noted the tendency in the literature to work within antinomies: interference vs generalized learning processes, behaviourism vs. mentalism, structure vs function, language vs communication etc. and warns against the dangers involved in this dichotomous way of thinking about language acquisition and behaviour.

T. Slama Cazacu has always insisted on the necessity to consider all the psycholinguistic variables involved in language learning : situation, age and personality of learners, individual teaching styles of teachers, finalities, etc. (cfr. Slama-Cazacu, 1973).

Titone (1981) has proposed an integrated holistic model of language learning comprising interacting components of a bevavioural and cognitive nature which are regulated by the the learner's personality structure. Morever, has encouraged experimental research to constantly refer to general theoretical frameworks and therefore avoid partial, reductive, sometimes naive accounts of such a complex process as is L2 development. (Titone, 1990).

Moreover, in my opinion, the contribution of the research done by Krashen, does not reside in neat dichotomous schemas, but in the intense exploration of the literature of numerous related disciplines (fetal anatomy, aphasia, adolescent psychology etc.). In fact he has identified a myriad of interacting variables in the language learning process which point to the importance of differences rather than encourage the search of "universals" in second language development and behaviour . The diagram as given in Dulay, Burt and Krashen 1982, p.36 is the best illustration of the model .



Within the general processes of language development, therefore, much weight is given to individual factors: age, personality, environment and first language, for example. Krashen moreover notes the existence of monitor" overusers" and monitor" underusers", and insists on the role of the "affective filter" whose strength depends on characteristics of the individual's personality profile (self-esteem, ego strength, defense mechanisms etc.).

Schumann (1977) has emphasized the importance of considering the numerous sociopsychological factors determining adult-child differences in language learning. That is why we perhaps should also take into account sociolinguistic variables, such as the general attitudes of the learner's culture towards other languages and other cultures, and especially how the educational system of the learner approaches foreign language learning, and language learning in general etc. To this effect, we should call attention to the fact that in Italy, metalinguistic activity is introduced very early in the primary curriclum . Primary school teachers often spend a good deal of classroom time on formal learning tasks, and to what traditionally has been called "grammar ". As early as the second grade, children are introduced to elementary grammatical categories (parts of speech, agreement etc.). By the fourth grade they are able to tackle more complex problems (tense, mood, subordination etc.), and produce complete linguistic descriptions of Italian morphology and syntax.. This is perhaps due to a long-established tradition in the Italian educational system of classical studies and perhaps consequently to the preference for formal language learning tasks in schools of all types and levels. The similarity between the <u>with</u> and <u>without</u> monitor strategies in the children's performance in this study may have also depended on the fact that Italian children are accustomed to working within explicit grammar teaching/learning situations.

Krashen asserts that the ideal classroom situation is one which exploits both acquisiton-like and learning environments, where, we could say, the monitor is permitted to do exactly what its name implies, "monitor" the acquisition process.
Moreover, according to Krashen, formal learning tasks are efficient , for those individuals who are good monitor users and who know how to achieve maximum benefit from learning-type competence and from formal learning situations.

If children also" learn" as I have suggested, that is, if acquisition and learning are not interpreted as dichotomous processes, but are considered to have interactive properties and to be present in everyone to varying degrees, (depending on age and characteristics related to the learner's personality profile), then obviously classroom situations should exploit the benefits of both types of strategies-- spontaneous or <u>without monitor</u> and formal or <u>with monitor</u>. We could agree perhaps that in younger learners, the scale pends more towards the <u>without monitor</u> strategy (but not to the exclusion of the <u>with monitor</u> strategy), and towards the <u>with monitor</u> strategy in the older learners (but not to the exclusion of the <u>without monitor</u> strategy), for the following reasons, however:

1. Older learners have a decidedly well-formed metalinguistic consciousness (Titone, 1985) and need tasks that

respond to the needs of a cognitively mature mind. They need rules, explanations, examples, analogies, explicit systematization of L2 data along with practice and communication activity.

2. Younger learners have a less structured cognitive network and a lower degree of metalinguistic competence, and need less formal learning activity.

3. Very young learners generally have a lower attention span and tire more easily with formal learning tasks. In this sense then it would be wise to dedicate a major part of classroom time to spontaneous, communicative, acquisition-like strategies, of the type we have experimented as without monitor. This does not mean however that formalization is to be excluded from the curriculum, not even in very young learners.

As a last comment, the best suggestion which can be made, as far as pedagogical applications of this theoretical stance is concerned, is that teachers should approach the classroom without "methodological prejudice", and adapt day by day to the complex specificity of the language learning situation in which they find themselves.

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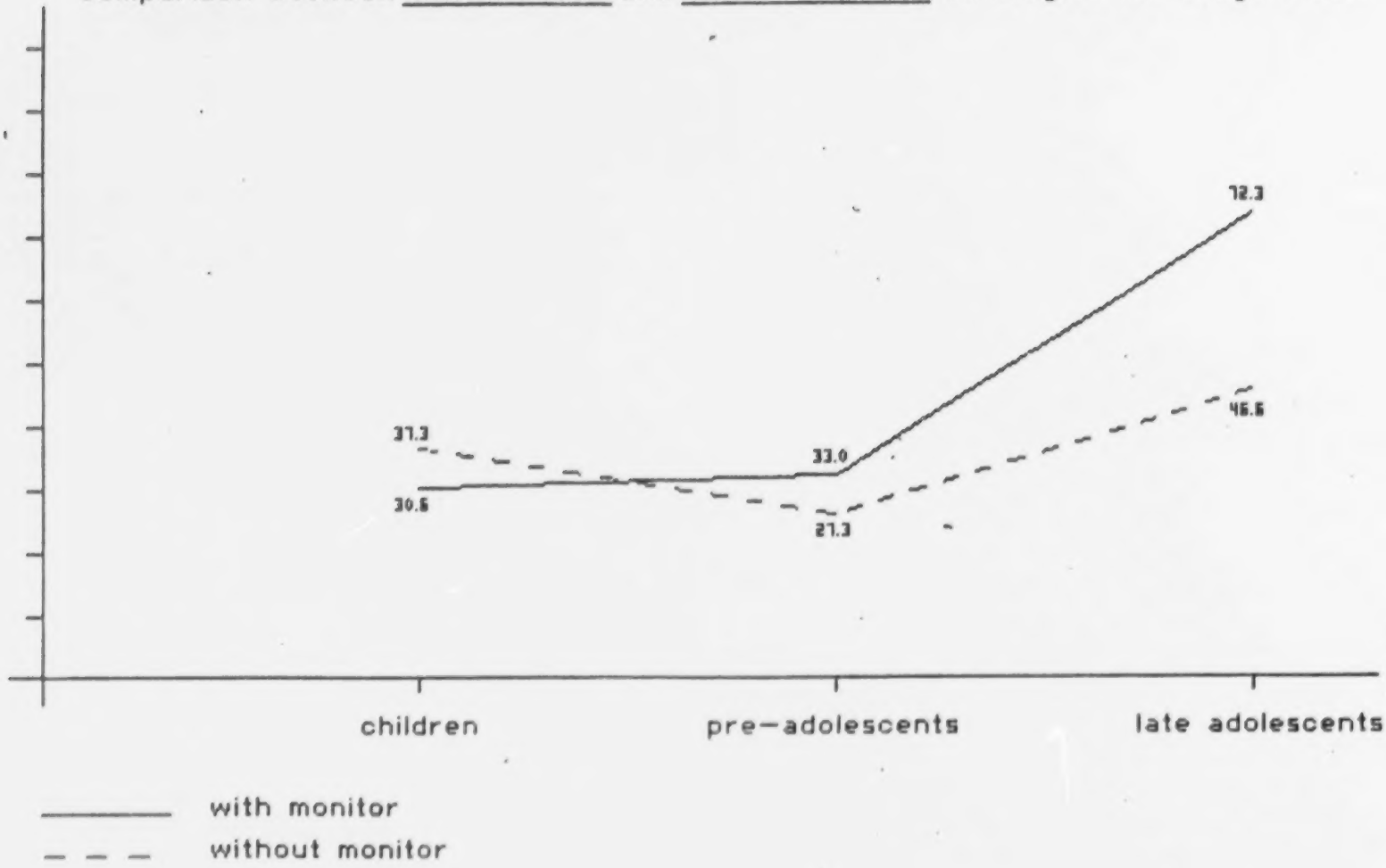
Comparison between with monitor and without monitor strategies for 3 age levels
72.3
46.6
37.3
33.0
30.6
27.3
children
pre-adolescents
late adolescents
with monitor
without monitor

Fig. 1